Subactivity: Environmental Satellite Observing Systems
Line Item: Satellite Command and Control

GOAL STATEMENT:

The goal of the Satellite Command and Control program is to provide efficient and secure command and control of 16 NOAA and Department of Defense (DoD) operational environmental satellites to ensure timely and uninterrupted delivery of data to users.

BASE DESCRIPTION:

The Nation requires an environmental satellite system capable of providing timely and accurate environmental data. Early warning of major weather events saves countless lives and prevents substantial property damage. Billions of dollars in damage and hundreds of lives are lost each year due to natural disasters. These losses would be significantly worse if NOAA satellite data and services were unavailable due to interference with, or the failure of, critical satellite command and data acquisition infrastructure.

The NOAA Satellite Command and Control program forms the backbone of the ground systems that command, control, and acquire data from on-orbit satellites with an estimated value of $4.5 billion on 24 hours per day, 365 days per year basis. The Satellite Command and Control program monitors satellite health and safety; schedules satellite operations and data acquisition to meet user needs; evaluates satellite systems performance; commands spacecraft; supports the National Aeronautics and Space Administration (NASA) during launch, activation, and evaluation of new satellites; and assesses satellite and ground station anomalies.

The Satellite Command and Control program provides the day-to-day operations of the NOAA Satellite Operations Control Center in Suitland, Maryland, and satellite command and data acquisition stations in Wallops, Virginia, and Fairbanks, Alaska. From these ground stations, NOAA operates and acquires data from Polar-orbiting Operational Environmental Satellites (POES), Geostationary Operational Environmental Satellites (GOES), and DoD Meteorological Satellite Program (DMSP). Data from other non-NOAA operational and research satellites are also received to support specific NOAA missions. The NOAA Satellite Command and Control program ensures acquisition and near real-time delivery of satellite data to product processing centers that, in turn, support NOAA's National Weather Service mission to protect lives and property during severe weather events.

Base activities support the objective, "Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs" under the Department of Commerce strategic goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

PROPOSED LEGISLATION:

None.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Environmental Satellite Observing Systems	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: Satellite Command and Control					
Satellite Command and Control	36,026	36,500	37,057	36,257	(800)
NSOF Operations	5,599	7,477	7,531	7,531	-
TOTAL	41,625	43,977	44,588	43,788	(800)
FTE	154	179	179	179	-

Note: The dollars in this table represent budget authority.

PROGRAM CHANGES FOR FY 2007:

Satellite Command and Control (-0 FTE and -$800,000): NOAA requests a decrease of 0 FTE and $800,000 for a total request of $43,788,000 for Satellite Command and Control activities. This decrease is in response to overall budgetary constraints and reflects reduced operational support for non-NOAA satellites.

Subactivity: Environmental Satellite Observing Systems
Line Item: Product Processing and Distribution

GOAL STATEMENT:

The Product Processing and Distribution (PP&D) program provides the Nation with specialized expertise and computing systems that ingest, process, analyze and distribute satellite-derived products and services that protect U.S. lives and property while enhancing the Nation's environmental, national, homeland, and economic security. PP&D ingests data from Earth-observing satellites to provide the highest quality products and services to its users.

BASE DESCRIPTION:

PP&D provides satellite-derived products and services using data from NOAA, the Department of Defense, and NASA environmental satellites, as well as foreign and commercial spacecraft, to national and international customers and users on a 24 hours-per-day, 7 days-per-week basis. PP&D products enable NOAA to accurately track the location, extent and duration of severe weather such as hurricanes, tornadoes, and winter storms; support development of flash flood warnings; track volcanic ash clouds and severe winds that threaten aviation safety; detect remote wildland fires; monitor coastal ecosystem health; identify and monitor maritime hazards from sea ice; and assist in search and rescue activities. PP&D is the operational interface with NOAA's National Weather Service and supplies the satellite data that makes up more than 99 percent of the information used in numerical weather prediction models. PP&D provides approximately 450 operational products organized into three categories: Atmospheric, Oceanographic, and Terrestrial.

The PP&D program is constantly assessing and using data from advanced satellite sensors to improve operational support to its customers. It also supports activities to improve the effectiveness and interoperability of national systems for sharing natural disaster information. By using maps and data generated by remote- and land-based sensors, this information is made widely accessible to all government agencies and other entities involved in managing and mitigating the impacts of disasters. PP&D products are widely used by all branches of the U.S. Armed Services and the Department of Homeland Security.

Included in the PP&D operations is NOAA's contribution to the joint National Ice Center, which monitors global sea ice conditions to support safe and effective maritime transportation in the Polar Regions, Great Lakes, and Arctic and North Atlantic waters. This service is critical to National Weather Service warnings in ice-prone sea lanes, U.S. Coast Guard rescue attempts, and civilian and military shipping communities.

PP&D provides NOAA's contribution to the operations of the U.S. mission control center for satellite-assisted search and rescue program (SARSAT). Since SARSAT's inception, more than 18,500 people have been saved worldwide. In 2003, NOAA expanded the SARSAT program to include the use of Global Positioning System (GPS) Personal Locator Beacons. This has greatly improved the SARSAT program's ability to save lives faster than before.

NOAA, the U.S. Navy and the U.S. Coast Guard jointly operate the U.S. National Ice Center (NIC). The NIC supports civil and military maritime communities by monitoring global sea ice conditions to support safe and effective marine transportation.

Satellites provide the basic capability to rapidly and accurately observe these events; however, unprocessed satellite data cannot be used directly by these or other critical applications without the around-the-clock PP&D operations.

Base activities support the objective, “Advance understanding and predict changes in the Earth’s environment to meet America’s economic, social, and environmental needs” under the Department of Commerce Strategic Goal of “Observe, protect, and manage the Earth's resources to promote environmental needs.”

PROPOSED LEGISLATION:

None.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Environmental Satellite Observing Systems	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: Product Processing and Distribution					
Product Processing and Distribution (MS)	22,401	23,620	23,983	23,583	(400)
Product Processing and Distribution (CT)	4,472	3,628	3,687	3,687	-
TOTAL	26,873	27,248	27,670	27,270	(400)
FTE	106	126	126	126	-

Note: The dollars in this table represent budget authority.

PROGRAM CHANGES FOR FY 2007:

Product Processing and Distribution (-0 FTE and -$400,000): NOAA requests a decrease of 0 FTE and $400,000 for a total request of $27,270,000 for Product Processing and Distribution activities. This decrease is in response to overall budget constraints and reflects reduced operational support for non-NOAA satellites.

Subactivity: Environmental Satellite Observing Systems
Line Item: Product Development, Readiness & Application

GOAL STATEMENT:

The goal of the NOAA's Product Development, Readiness, and Applications program (PDR&A) is to provide applications-focused research that will develop and evaluate prototype products, algorithms, and pre-operational products to improve existing operational satellite products and services using data from current and next generation environmental satellites.

BASE DESCRIPTION:

The Nation needs to enhance its use of satellite data to improve and extend weather forecasts, to expand environmental monitoring and assessment capabilities, and to provide new and improved tools for ecosystems-based management. In the next few years, the number and quality of satellite instruments will grow significantly, providing enhanced data capable of allowing major improvements in weather prediction accuracy. To make these improvements, targeted research and a cadre of scientists and computing systems dedicated to development is necessary. The PDR&A program ensures the highest accuracy of NOAA's current satellite data and products via a robust and rigorous operational environmental satellite data calibration/validation program. This effort improves product quality for the benefit of all users. The program supports pre-operational development of products for weather, atmospheric, climate, land, wildland fire, and oceans and coastal applications. NOAA's Ocean Remote Sensing Program supports sea surface temperature, ocean color, satellite altimetry, oceanic rainfall measurements, and coastal monitoring tools for the CoastWatch program.

PDR&A supports a portion of the funding for the Joint Center for Satellite Data Assimilation (JCSDA), which accelerates the application of satellite data for improving weather forecast models. The JCSDA was established to speed the development of new satellite data assimilation science. NOAA (NWS, OAR, and NESDIS), NASA and DoD are partners in this coordinated national effort to more fully realize the potential of the vast quantities of new satellite data that are becoming available. The JCSDA is also a risk reduction measure designed to accelerate NPOESS data utilization for the development of numerical weather prediction models, and forecast models that will lead to increased accuracy and longer-range forecasts. In the next few years, the number and quality of satellite instruments will grow significantly, providing an exponential increase in higher quality data capable of allowing major improvements in the accuracy of weather prediction.

PDR&A also incorporates the latest academic findings into its work through competitively awarded Cooperative Institutes with academic institutions (Universities of Wisconsin, Maryland, Colorado State, and Oregon State, City College of New York). The academic expertise and the results of investigations are infused into product development, readiness, and applications that either lead to improvements in existing products or to the development of new products or sensors.

Base activities support the objective, “Advance understanding and predict changes in the Earth’s environment to meet America’s economic, social, and environmental needs” under the Department of Commerce Strategic Goal of “Observe, protect, and manage the Earth's resources to promote environmental needs.”

PROPOSED LEGISLATION:

None.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Environmental Satellite Observing Systems	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: Product Development, Readiness & Application					
Product Development, Readiness & Application	16,601	16,987	17,315	16,915	(400)
Product Development, Readiness & Application (Ocean Remote Sensing)	3,942	3,925	3,861	3,861	-
Coral Reef Monitoring	690	-	-	737	737
Research to Ops / NOAA-NASA partnerships	3,942	3,945	-	-	-
Joint Center/Accelerate Use of Satellites	2,168	3,247	3,258	3,258	-
Global Wind Demo	3,696	3,649	982	-	(982)
TOTAL	31,039	31,753	25,416	24,771	(645)
FTE	86	103	103	103	-

Note: The dollars in this table represent budget authority.

PROGRAM CHANGES FOR FY 2007:

Product Development, Readiness and Application (-0 FTE and -$400,000): NOAA requests a decrease of 0 FTE and $400,000 for a total request of $16,915,000 for Product Development, Readiness and Application activities. This decrease is in response to overall budgetary constraints and reflects reduced operational support for non-NOAA satellites.

Coral Reef Monitoring: (0 FTE and $737,000): NOAA requests an increase of 0 FTE and $737,000 for a total request of $737,000 to carry out the coral reef monitoring activities. PDR&A supports the development and maintenance of operational satellite products aimed at near real-time observation, monitoring and forecasting of environmental conditions conducive to deterioration of coral reef health, often resulting from coral reef bleaching events. These products are necessary to comply with Executive Order 13089, the Coral Reef Conservation Act of 2000, and the U.S. Ocean Action plan, which all direct Federal agencies to use programs and authorities to protect and enhance coral reef ecosystems. This funding enables production of models to integrate satellite / in situ measurements with the efforts of the Coral Reef Ecosystem Integrated Observing System within other NOAA line offices. The Coral Reef Watch Program is collaborative effort under the auspices of NOAA's Coral Reef Matrix Team.

Global Winds Demonstration Project: (-0 FTE and -$982,000): The proof of concept for the Global Winds Demonstration Project was completed in FY 2006, and this program will be phased out.

TERMINATIONS FOR FY 2007: The following programs, or portions thereof, are terminated in FY 2007: Research to Ops/NOAA-NASA Partnerships ($3,945,000), and Global Wind Demo ($2,667,000).

Subactivity: Environmental Satellite Observing Systems
Line Item: Interagency Global Positioning System Executive Board Secretarial (IGEB)

GOAL STATEMENT:

The Interagency GPS Executive Board (IGEB) was established by Presidential directive in 1996 to manage the Global Positioning System (GPS) and its U.S. Government augmentations as a national asset.

BASE DESCRIPTION:

The IGEB is a senior-level policy making body chaired jointly by the Departments of Defense and Transportation. Its membership includes the Departments of State, Commerce, Homeland Security, Interior, and Agriculture, as well as NASA and the Joint Chiefs of Staff. Through this program, NOAA funds the permanent Executive Secretariat, which provides day-to-day staff support to the IGEB principals. The Executive Secretariat is a point of contact for inquiries regarding GPS policy. For FY 2007, this activity will be supported within the Office of Space Commercialization.

PROPOSED LEGISLATION:

None.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Environmental Satellite Observing Systems	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: Interagency Global Positioning System Executive Board Secretarial (IGEB)					
TOTAL	247	-	-	-	-
FTE	1	-	-	-	-

Note: The dollars in this table represent budget authority.

PROGRAM CHANGES FOR FY 2007:

None.

Subactivity: Environmental Satellite Observing Systems
Line Item: Commercial Remote Sensing Licensing & Enforcement

GOAL STATEMENT:

The Commercial Remote Sensing Licensing and Enforcement (CRSL&E) program works with its interagency and international partners to facilitate timely and well-informed regulatory decisions, which advance U.S. economic, foreign policy, and national security interests. The program licenses remote sensing space systems; performs associated research, monitoring and compliance activities; and ensures that the operation of these systems is consistent with the terms and conditions of their operating licenses.

BASE DESCRIPTION:

Commercial Remote Sensing Licensing & Enforcement:

The Nation requires a consistent and transparent regulatory process for licensing commercial remote sensing space systems in order to promote U.S. technological competitiveness and economic security, while ensuring satellite operation is consistent with our national security, intelligence, and foreign policy needs. The CRSL&E program supports these requirements while furthering the Nation's homeland security and national security missions.

The CRSL&E program coordinates interagency review of satellite license applications, amendments, and significant foreign agreements. NOAA licenses commercial remote sensing space systems and performs associated monitoring and compliance pursuant to the Secretary of Commerce's statutory responsibilities, which have been delegated to NOAA. Prior to issuing licenses, NOAA must consult with the Departments of Defense and State to ensure license compliance with national security and foreign policy, respectively. NOAA reviews licensees' ongoing procedures to protect sensitive data. NOAA also works closely with other U.S. Government agencies to implement policy and ensure international coordination. During national security or foreign policy crises, the Secretary of Commerce may exercise limitations on routine commercial operations in response to a request from the Secretary of Defense or the Secretary of State.

Major monitoring and compliance activities supported by NOAA include review of quarterly license reports, on-site inspections, audits, license violation enforcement, and implementation of restrictions during national security and foreign policy crises. The number of license applications and revocations vary each year, and are not predictable. The Department of Commerce's Bureau of Industry and Security is responsible for enforcement and ensuring compliance with the terms of the license agreements.

The current estimated global market for remote sensing imagery and services is approximately $2.9 billion, and is forecast to grow to $6.0 billion by 2010. Dramatic future growth is expected due to growing civil and military user requirements, improvements in aerospace and information technologies, and e-commerce.

U.S. companies will provide exciting new sources of environmental products and services, which will strengthen our military capabilities, safeguard our economic infrastructure, and protect our natural resources. The regulatory framework, pursuant to the 2003 U.S. Commercial Remote Sensing Policy, recognizes the support that is required for growth of this industry. The CRSL&E program ensures a vigorous U.S. commercial remote sensing industry to support critical U.S. national security, foreign policy, and homeland security requirements, and advance our economic and technological interests worldwide.

Base activities support the objective, "Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

Office of Space Commercialization:

NOAA also manages the Office of Space Commercialization (OSC) for the Department of Commerce. The Department of Commerce plays a key role in the development of U.S. Government policies that foster the growth and competitiveness of the U.S. commercial space industry. It serves as an advocate for the industry within interagency deliberations affecting the future of space, encouraging the promotion of commercial interests as well as national security, foreign policy, and other interests. NOAA supports the Department's efforts to advance the development and implementation of the Administration's three new space sector policies for: commercial remote-sensing; positioning, navigation, and timing; and space transportation.

Base activities support the objective, "Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Goal of "Observe, protect, and manage the Earth's resources to promote environmental needs."

PROPOSED LEGISLATION:

None.

SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Environmental Satellite Observing Systems	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: Commercial Remote Sensing Licensing & Enforcement					
Commercial Remote Sensing Licensing & Enforcement	1,085	1,228	1,240	1,240	-
Remote Sensing Center	-	1,972	-	-	-
Office of Space Commercialization	591	591	601	601	-
TOTAL	1,676	3,791	1,841	1,841	-
FTE	8	6	6	6	-

Note: The dollars in this table represent budget authority.

PROGRAM CHANGES FOR FY 2007:

TERMINATIONS FOR FY 2007: The following program was terminated in FY 2007: Remote Sensing Center ($1,972,000)